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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/766,742	01/27/2004	Mark Fimoff	7245	2834
7590 Zenith Electronics Corporation 2000 Millbrook Drive Lincolnshire, IL 60069			EXAMINER WONG, LINDA	
			ART UNIT 2611	PAPER NUMBER
			MAIL DATE 10/17/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/766,742	FIMOFF ET AL.	
	Examiner	Art Unit	
	Linda Wong	2611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 09 August 2007.
 2a) This action is FINAL. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-34 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) Claim(s) 1-26 and 31-34 is/are allowed.
 6) Claim(s) 27,28 and 30 is/are rejected.
 7) Claim(s) 29 is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____.

 | 6) <input type="checkbox"/> Other: _____ |

Response to Arguments

1. Applicant's arguments, see applicant's remarks, filed 8/9/2007, with respect to claims 1-26 have been fully considered and are persuasive. The rejection of 35 USC 103(a) has been withdrawn.
2. Applicant's arguments, see applicant's remarks, filed 8/9/2007, with respect to the rejection(s) of claim(s) 27-28 under Chu et al have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Chen et al (US Publication No.: 20040013191).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. **Claims 27-28,30** are rejected under 35 U.S.C. 102(e) as being anticipated by Chen et al (US Patent No.: 20040013191).
 - a. **Claim 27**, Chen et al discloses
 - “supplying segments of received symbols to the equalizer to produce equalize segments, wherein each of the segments of received symbols

occupies a corresponding segment time period" (Fig. 2, labels 1st stage, 2nd stage, etc. and T(1,1), T(1,2), etc.)

- "decoding the equalized segments by a decoder to produce decoded segments" (F2, label Final decoded symbol)
- "calculating adjustments for the equalizer based on n decoded segments and n segments of received symbols, wherein n>= 1" (Fig. 3, Fig. 4, labels C(n), paragraph 48 discloses "each pipe covers a group of consecutive taps." "Each group of L consecutive taps feeds into one of the pipes, the first tap group starting with c0(n) through cl-1(n) feeding into pipe no. 1. Paragraph 50 discloses "each reuse pipe, the L tap coefficients and L data symbols are input consecutive to the multiplier A ...". Paragraph 39 discloses "tap coefficients in the equalizer change gradually."
- "wherein the calculating of adjustments is performed in a pipelined manner at least twice per segment time period." (As indicated in paragraph 50, each reuse pipe has L tap coefficients and L data symbols. Paragraph 39 indicates the equalizer's tap coefficients are changed. Fig. 2 shows the segments of the data for the pipelined equalizers.) Although Chen et al does not explicitly disclose updating the coefficients at least 2 per segment time period, paragraph 50 discloses each reuse pipe is reused L clock cycles. Thus it would be obvious to one skilled in the art at the time of the invention to adjust the taps at least twice as per Chen et al's disclosure to minimize errors in the symbols being equalized.)

- “applying the adjustments to the equalizer” (Fig. 3, 4)
- b. **Claim 28**, Chen et al disclose n = 3. (Fig. 2, labels 1st stage, 2nd stage, ...)
- c. **Claim 30**, Chen et al discloses “each of the segments of received symbols includes at least 700 symbols.” (Paragraph 42 disclose “D symbols per stage” and “each sequence of D symbols”, wherein D can equal 700.)

Allowable Subject Matter

4. **Claims 1-26, 31-34** are allowed.
5. **Claim 29** is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Linda Wong whose telephone number is 571-272-6044. The examiner can normally be reached on 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Payne can be reached on (571) 272-3024. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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Linda Wong
10/3/2007

David C. Payne
DAVID C. PAYNE
SUPERVISORY PATENT EXAMINER